

March 2005

Application for Incidental Harassment Authorization For Marine Near-Shore Logistics Barging Operations Beaufort Sea, Alaska

Submitted by FEX L.P.

March 2005

FEX L.P. (FEX) used the following guidance to prepare its request for Incidental Harassment Authorization. This information is either contained in this request or it will be provided as soon as practicable upon progress with outreach efforts with the Alaska Eskimo Whaling Commission (AEWC), its applicable membership Whaling Captains Associations, and other Native subsistence entities. The Conflict Avoidance Agreement (CAA) and related information will be provided as it is finalized.

50 CFR 216.104 Submission of Requests.

(a) In order for the National Marine Fisheries Service to consider authorizing the taking by U.S. citizens of small numbers of marine mammals incidental to a specified activity (other than commercial fishing), or to make a finding that an incidental take is unlikely to occur, a written request must be submitted to the Assistant Administrator. All requests must include the following information for their activity:

A detailed description of the specific activity or class of activities that can be expected to result in incidental taking of marine mammals;

Marine barge transit of a drilling rig, consumables, fuel, essential construction equipment and supplies from West Dock to Cape Simpson or Pt. Lonely is proposed (see Figure 1). Equipment will be staged and stored in preparation of the upcoming winter on-shore oil and gas drilling and testing season. All drilling activities and bottom hole locations will be located on federal NW NPR-A Oil and Gas Leases.

Two tugs with barges are proposed for the marine lift from West Dock. The Kavik River (1100 horsepower) and the Sag River (1100 horsepower) or comparable class tugs, will each tow a single barge to Cape Simpson or Pt. Lonely. Approximately six roundtrips will be required for project mobilization.

The CAA is currently being discussed with the AEWC. Summer marine activities will comply with the CAA prior to the autumn bowhead hunt by the residents of Kaktovik (Barter Island), Nuiqsut (Cross Island) and Barrow Native villages. Ice, bad weather conditions, and other possible operational considerations may affect the timing of the barge activity and may require that

Application for Incidental Harassment Authorization

March 2005

some activities take place beyond the scheduled target dates, but not during the September 1 – October 15 period.

Operations to support winter on-shore drilling operations may require a winter trail on landfast sea ice. These operations will not result in incidental takes with marine mammals subject to the IHA. If this trail is needed, work would be initiated prior to March 20 and may not extend past March 20.

The date(s) and duration of such activity and the specific geographical region where it will occur;

Barge traffic between West Dock and Cape Simpson or Pt. Lonely is scheduled to occur during the open-water season each year. Should weather or ice conditions delay the barging; every effort will be made to move the drilling rig and supplies to Cape Simpson or Pt. Lonely prior to August 15, but no later than September 1, 2005. A late season barge effort between October 15 and November 30 will be addressed in the CAA. The 2005 open-water marine component will be complete after the drill rig and supplies are stored at Cape Simpson or Pt. Lonely.

The species and numbers of marine mammals likely to be found within the activity area;

The activity area is located within the range of a number of marine mammal species. The species regulated by NMFS that may be present during the proposed period of activity are bowhead whale, beluga whale, ringed seal, spotted seal and bearded seal. FEX will record information on any other marine mammals (e.g. killer whale and harbor porpoise) that may be encountered in the project mobilization and logistic support area.

Exposure to these marine mammals will be greatly reduced by the transient nature of this project. Findings indicate local species during this time move basin ward, toward the ice edge, at this time.

According to NOAA Fisheries, the spring 2001 population estimate shows about 9,860 bowhead whales in the western Arctic stock, up from 8,200 when last estimated in 1993. These calculations incorporate the latest bowhead whale abundance estimate with more than two decades of observations. Their population appears to be growing now at about three percent each year, recovering from extensive whaling.

The sources of information to estimate abundance for belugas in the waters of northern Alaska and western Canada have included both opportunistic and systematic observations. Duval (1993) reported an estimate of 21,000 for the Beaufort Sea stock, similar to that reported by Seaman et al. (1985). The most recent aerial survey was conducted in July of 1992, when stock size was estimated to include 19,629 (CV = 0.229) beluga whales (Harwood et al. 1996). To account for availability bias a correction factor (CF), which was not data-based, has been recommended for the Beaufort Sea beluga whale stock (Duval 1993), resulting in a population estimate of 39,258 ($19,629 \times 2$) animals. A CV for the CF is not available; however, this CF was considered negatively biased by the Alaska SRG considering that CFs for this species typically range between 2.5 and 3.27 (Frost and Lowry 1995).

There are no reliable estimates for bearded seals in the Beaufort Sea or in the activity area (Angliss et al. 2001), but recent surveys show that few bearded seals inhabit the activity area only during December through May.

A reliable abundance estimate for the entire Alaska stock of ringed seals is currently not available. Crude estimates of the abundance of ringed seals in Alaska include 1-1.5 million (Frost 1985) or 3.3-3.6 million (Frost et al. 1988). One estimate of ringed seals is based on aerial surveys conducted in 1985, 1986, and 1987 by Frost et al. (1988). Survey effort was directed towards shore fast ice within 20 nm of shore, though some areas of adjacent pack ice were also surveyed, in the Chukchi and Beaufort Seas from southern

Application for Incidental Harassment Authorization

March 2005

Kotzebue Sound north and east to the U. S. -Canada border. Densities of ringed seals in the Alaska Beaufort Sea in 1998 averaged 0.93 seals/km²; seal densities were higher to the east of Flaxman Is than to the west of Flaxman Island (1.19 seals/km² and 0.81 seals/km², respectively). No population estimates have been calculated for the Alaska Beaufort Sea.

A description of the status, distribution, and seasonal distribution (when applicable) of the affected species or stocks of marine mammals likely to be affected by such activities;

The Beaufort Sea stock of beluga whales is considered to be stable or increasing (DeMaster 1995: pp. 16). Duval (1993) reported an estimate of 21,000 for the Beaufort Sea stock, similar to that reported by Seaman et al. (1985). The most recent aerial survey was conducted in July of 1992, when stock size was estimated to include 19,629 (CV = 0.229) beluga whales (Harwood et al. 1996). Seasonal distribution is affected by ice cover, tidal conditions, access to prey, temperature, and human interaction (Lowry 1985). During the winter, beluga whales occur in offshore waters associated with pack ice. In the spring, they migrate to warmer coastal estuaries, bays, and rivers for molting (Finley 1982) and calving (Sergeant and Brodie 1969).

Neither ringed nor bearded seal species is designated as a depleted stock by the Marine Mammals Protection Act (MMPA) or is listed by the federal government as threatened or endangered. These species as well as other marine mammal species in the Beaufort Sea appear to have stable to increasing populations, which is a condition indicative of a healthy ecosystem. Similarly, the most recent estimate of bowhead whales shows the population has steadily increased annually at a growth rate of 3.4% (95% CI of 2.1-4.8%) to 10,020 (95% CI of 7,800-12,900) animals (SC/55/BRG7, IWC 2002). These increases are occurring in concert with subsistence harvest of these species, including a five-year harvest quota of 255 bowheads. The status of these marine mammal populations reflects the high quality of the habitat, which supports abundant and diverse prey populations.

Ringed seals are year-round residents in the Beaufort Sea. They are the most abundant and widely distributed species of marine mammal in the Beaufort Sea (Frost et al. 1988). The worldwide population is estimated at 6 to 7 million (Stirling and Calvert 1979). The Alaska stock of the Bering - Chukchi - Beaufort Sea area is roughly estimated at 1 to 1.5 (Frost 1985) or 3.3 to 3.6 million seals (Frost et al. 1988). Although there are no recent population estimates in the Beaufort Sea, Bengston et al. (2000) estimated ringed seal abundance from Barrow south to Shismaref in a portion of the Chukchi Sea to be 245,048 animals from aerial surveys flown in 1999. The authors of the NMFS 2001 Stock Assessment Report stated that there are at least as many ringed seals in the Beaufort Sea (Angliss et al. 2001). Frost et al. (1999) reported that observed densities within the area of industrial activity along the Beaufort Sea coast were generally similar between 1985-87 and

Application for Incidental Harassment Authorization

March 2005

1996-98, suggesting that the regional population has been relatively stable during this 13-year period of industrial activity. Mating of ringed seals occurs in late April and May. From mid-May through July, ringed seals haul out in the open air at holes and along cracks to bask in the sun and molt.

The seasonal distribution of ringed seals in the Beaufort Sea is affected by a number of factors but a consistent pattern of seal use has been documented since monitoring began over 20 years ago by using aerial surveys. Seal densities have historically been substantially lower in the western than the eastern part of the Beaufort Sea (Bums and Kelly 1982, Kelly 1988). Frost et al. (1999) reported consistently lower ringed seal densities in the western versus eastern sectors they surveyed in the Beaufort Sea during 1996, 1997, and 1998. The relatively low densities appear to be related to much of the area occurring between the shore and the barrier islands, which is generally shallow.

The bearded seal inhabits the Bering, Chukchi, and Beaufort seas (Bums and Frost 1979). Numbers are considerably higher in the Bering and Chukchi seas, particularly during winter and early spring. Based on the available data there is no evidence of a decline in the bearded seal population. Bearded seals are generally associated with pack ice and only rarely use shorefast ice (Bums and Harbo 1972). Bearded seals occasionally have been observed maintaining breathing holes in annual ice and even hauling out from holes used by ringed seals (Mansfield 1967, Stirling and Smith 1977).

The type of incidental taking authorization that is being requested (i.e. takes by harassment only; takes by harassment, injury and/or death) and the method of incidental taking;

No intentional or other taking of any marine mammal is planned at any time during the transit of any vessel or vessel under tow in this project.

By age, sex, and reproductive condition (if possible), the number of marine mammals (by species) that may be taken by each type of taking identifies in paragraph (a)(5) of this section, and the number of times such takings by each type of taking are likely to occur;

While operations under transit have the potential to disturb and temporarily displace some mammals, any impacts will consist of behavior only. Any takes anticipated will result from short-term disturbances by noise of vessels underway. However, the disturbance is not likely to have any effect on the population as a whole due to the following:

limited area of transect;

random distribution of ringed seals;

occurrence of transect in near shore waters where ringed seal densities are extremely low;

Application for Incidental Harassment Authorization

March 2005

the relatively large size of the ringed seal population in the Beaufort Sea and throughout Alaska.

This pattern of use indicates that adult seals and pups can move away from audio disturbance activities, particularly since the transient equipment does not remain in any specific area for a prolonged time. Given these considerations combined with the small proportion (<1%) of the population potentially disturbed by the proposed activity, impacts are expected to be negligible for the overall ringed and also bearded seal populations

The anticipated impact of the activity upon the species or stock of marine mammals;

Anticipated impact of transiting barge(s) is expected to be limited to short-term and localized behavioral changes involving relatively small numbers of seals. Any exposure to other marine mammals will be limited to distant and transient exposure as well.

The anticipated impact of the activity on the availability of the species or stocks of marine mammals for subsistence uses;

Barrow residents are the primary subsistence users in the activity area. The subsistence harvest during winter and spring is primarily ringed seals, but during the open-water period both ringed and bearded seals are taken. Barrow hunters may hunt year round; however in more recent years most of the harvest has been in the summer during open water instead of the more difficult hunting of seals at holes and lairs (McLaren 1958, Nelson 1969). The Barrow fall bowhead whaling grounds, in some years, takes in the Cape Simpson and Point Lonely areas (e.g. 1990 season, when a large aggregation of feeding bowheads were pursued by Barrow hunters).

The most important area for Nuiqsut hunters is off the Colville River Delta in Harrison Bay, between Fish Creek and Pingok Island (149°40' W) Seal hunting occurs in this area by snow machine before spring break-up and by boat during summer. Subsistence patterns are reflected in harvest data collected in 1992 where Nuiqsut hunters harvested 22 of 24 ringed seals and all 16 bearded seals during the open water season from July to October (Fuller and George, 1997). Harvest data for 1994 and 1995 show 17 of 23 ringed seals were taken from June to August, while there was no record of bearded seals being harvested during these years (Brower and Opie, 1997).

Due to the transient and temporary nature of the barge operation, impacts upon these seals are expected to have no more than a negligible impact on subsistence uses of ringed and bearded seals because:

Transient operations would temporarily displace relatively few seals.

Displaced seals would likely move a short distance and remain in the area for potential harvest by native hunters.

Application for Incidental Harassment Authorization

March 2005

Studies at the Northstar development, which is much larger than the proposed barge operation, found no evidence of the development activities affecting the availability of seals for subsistence hunters; however, the Northstar vicinity is outside the areas used by subsistence hunters (Williams and Moulton, 2001).

The area where barge operations would be conducted is small compared to the large Beaufort Sea subsistence hunting area associated with the extremely wide distribution of ringed seals.

In order to further minimize any effect of barge operations on the availability of seals for subsistence, Crowley tugs will maintain U. S. Coast Guard rules and regulations near coastal water, therefore avoiding hunters and the locations of any seals being hunted in the activity area, whenever possible.

The barging, as scheduled, will be completed prior to beginning of the fall westward migration of bowhead whales and the associated subsistence activities by the local whalers.

The anticipated impact of the activity upon the habitat of the marine mammal populations, and or likelihood of restoration of the affected habitats;

The anticipated impact of maritime barging activity upon the habitat of marine mammal populations would be negligible because disturbance would be very localized, audible, short term and quickly restored back to a natural condition upon the passing of any vessel.

The anticipated impact of the loss or modification of the habitat on the marine mammal populations involved;

No impact is anticipated because no loss or modification of habitat will result from the proposed barging activities.

The availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, their habitat, and on their availability for subsistence uses, paying particular attention to rookeries, mating grounds, and areas of similar significance;

Effects on most individual seals and other mammals are expected to be limited to localized and temporary displacement (Level B Harassment). No greater than a negligible impact is anticipated on the species or stock or the availability of the species for subsistence uses. Moreover, any effects on ringed or bearded seal habitat are expected to be temporary, localized, and largely limited to a relatively small area along the transect area.

Nevertheless, all activities will continue to be conducted to assure the least practical adverse impact on the species, habitat, and availability for subsistence uses.

Application for Incidental Harassment Authorization

March 2005

Where the proposed activity would take place in or near a traditional Arctic subsistence hunting area and/or may affect the availability of a species or stock of marine mammal for Arctic subsistence uses, the applicant must submit either a plan of cooperation or information that identifies what measures have been taken to minimize any adverse effects on the availability of marine mammals for subsistence uses. A plan must include the following:

(i) A statement that the applicant has notified and provided the affected subsistence community with a draft plan of cooperation;

FEX met in Barrow with community leaders and has trips planned to meet with the subsistence user community. FEX will provide details of those meetings and will provide a copy of the draft Plan of Cooperation. FEX is entering into a Conflict Avoidance Agreement with the Alaska Eskimo Whaling Association.

(ii) A schedule for meetings with the affected subsistence communities to discuss proposed activities and to resolve potential conflicts regarding any aspects of either the operation or the plan of cooperation;

Meeting schedules are being finalized with the subsistence communities, the AEWC and the Whaling Captains Association. FEX plans an interactive dialogue in the communities and will provide project details and specifications in the meetings. The meetings will be conducted to resolve potential conflicts with either the project operation or the plan of cooperation.

(iii) A description of what measures the applicant has taken to ensure that proposed activities will not interfere with subsistence whaling or sealing; and

(iv) What plans the applicant has to continue to meet with the affected communities, both prior to and while conducting the activity, to resolve conflicts and to notify the communities of any changes in the operations;

FEX will continue to maintain active dialogue prior to the start of project activities to resolve conflicts and to notify communities of any changes in the operations. FEX schedules will accommodate the desires of the subsistence community by avoidance of the areas of interest. FEX met with local NOAA representative and will act on the advice presented during the meeting. For example, FEX learned that activities could deflect marine mammals and is arranging the schedule to avoid such deflection.

The suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species, the level of taking or impacts that are expected to be present while conducting activities and suggested means of minimizing burdens by coordinating such reporting requirements with other schemes already applicable to persons conducting such activity. Monitoring plans should include a description of the survey techniques that would be used to determine the movement and activity of

Application for Incidental Harassment Authorization

March 2005

marine mammals near the activity site(s) including migration and other habitat uses, such as feeding.

FEX L.P. will conduct visual observations from the barge tug(s) during transit between West Dock and Cape Simpson or Pt. Lonely.

Qualified observers will include one professional marine biologist and at least one experienced Native observer. The observers will scan the area around tug/barge with 7x50 reticule binoculars during the daylight hours, supplemented by night vision equipment during low light operations, if required. Laser range finding binoculars will be used for distance estimation. The shipboard observation monitoring program will document the presence, distribution, and behavior of marine mammals sighted from project associated vessels. The program will commence with barges towed from West Dock to Cape Simpson or Pt. Lonely and will continue on a nearly 24-hour basis until the rig and support equipment are placed in storage at Cape Simpson or Pt. Lonely and the barges return to West Dock no later than September 1.

The main objective of the vessel-based observation program is to detect the presence, abundance, and behavior of bowhead whales. The Barrow fall bowhead whaling grounds, in some years, takes in the Cape Simpson and Point Lonely areas. Bowhead whales have passed within sighting distance of barges under tow in the Beaufort Sea. The majority of sightings are further offshore in deeper waters.

FEX will use visual observations of trained personnel combined with climatic condition measurement to locate and assess the behavior of the local species of marine mammals that are known to use or may use the Harrison and Smith Bay Area and the transit route. The local species of marine mammals are the bowhead whale, gray whale, beluga whale, ringed seal, spotted seal, bearded seal, walrus, and polar bear. FEX will record information on any other marine mammals (e.g. killer whale and harbor porpoise) that may be encountered in the project mobilization and logistic support area.

The open-water marine monitoring program is expected to occur during an approximate 13-day period. Monitoring will continue until marine operations are completed on or before September 1. The following measures will be included in the open-water monitoring program:

Qualified observer(s) trained by a professional marine biologist including an experienced Native observer(s) will accompany each tow vessel.

The marine biologist and Native observer(s) will be onboard the tow vessels and available via radios/phones for consultation and guidance.

All vessels will be equipped with basic weather monitoring equipment (i.e. temperature and barometric pressure instrumentation). Visual weather observations will document climate conditions when marine mammal observations occur.

The attached "Marine Mammal Monitoring Form" will be used to document field observations and measurements at the time observations of marine mammals occur.

Application for Incidental Harassment Authorization

March 2005

All marine mammal observations will be provided daily to the NMFS, unless otherwise requested by the NMFS.

If a coordination center is opened by other North Slope operators and operated during FEX' s monitoring operations, all sightings of marine mammals will be provided to that location.

A report documenting and analyzing any "incidental takes" of marine mammals that occur as part of this monitoring program will be provided to the NMFS within 90 days of completion of the monitoring activities. Copies will be provided to other qualified interested parties.

Suggested means of learning of, encouraging, and coordinating research opportunities, plans, and activities relating to reducing such incidental taking and evaluating its effects.

FEX is intends to enter into a Conflict Avoidance Agreement with the Alaska Eskimo Whaling Commission.